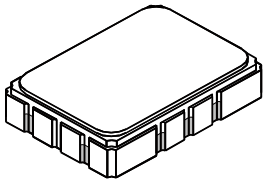
RFMi
A BRAND OF AKOUSTIS

RoHS compliant

SF2331B

246 MHz SAW Filter

- ***Narrow-band SAW Filter***
- ***5 x 7 mm Surface-mount Package***
- ***Complies with Directive 2002/95/EC (RoHS)***
- ***Moisture Sensitivity Level: 1***



SMP-03

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	0	dBm
Maximum DC Voltage on any Non-ground Terminals	3	VDC
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Suitable for Lead-free Soldering - Maximum Soldering Profile	260 °C for 30 s	

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_C			246		MHz
Minimum Insertion Loss	IL_{MIN}			5.0	6.5	dB
3 dB Bandwidth	BW_3			600		kHz
Amplitude Ripple, f_C ± 225 kHz				1.2	2.0	dB_{P-P}
Rejection Referenced to IL_{MIN}:						dB
10 MHz to Fc-20 MHz			45.0	55.0		
Fc-20MHz to Fc-1.2MHz			40.0	45.0		
Fc+1.2MHz to Fc+20MHz			40.0	45.0		
Fc+20MHz to 1GHz			45.0	55.0		
Operating Temperature Range			-20		+70	°C

Case Style		SMP-03 7 x 5 mm Nominal Footprint
Lid Symbolization (Y=year, WW=week, S = shift, ## = Sequence Code) dot=pin 1 indicator		RFM, SF2331B, YYWWS##
Standard Reel Quantity	Reel Size 7 Inch	500 Pieces/Reel
	Reel Size 13 Inch	2000 Pieces/Reel

Electrical Connections

Connection	Terminals
Input Port	10
Output Port	5
Ground	All others

CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

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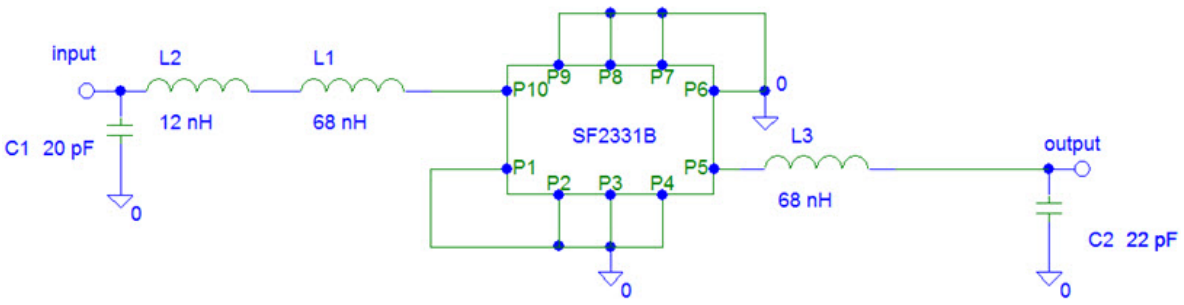
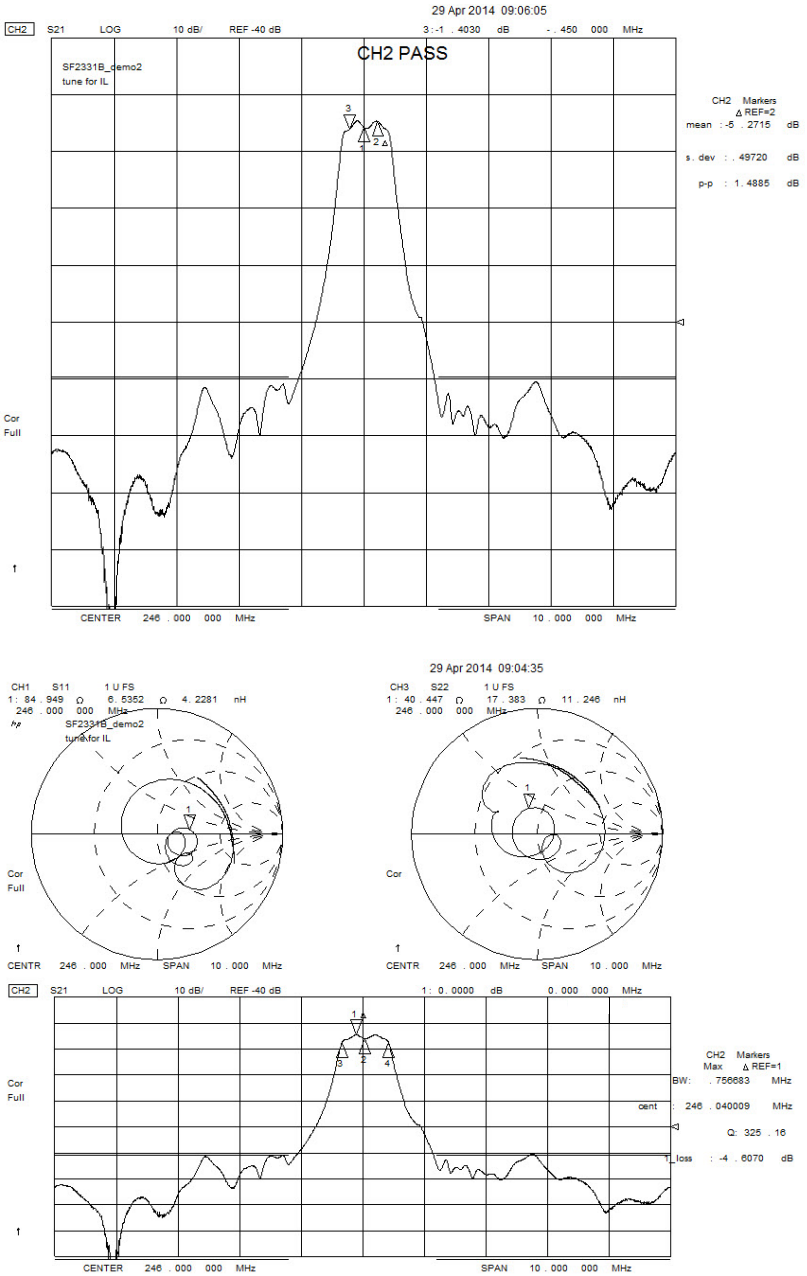
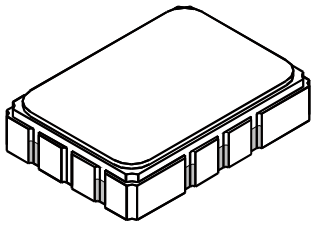
Typical Tuning Network



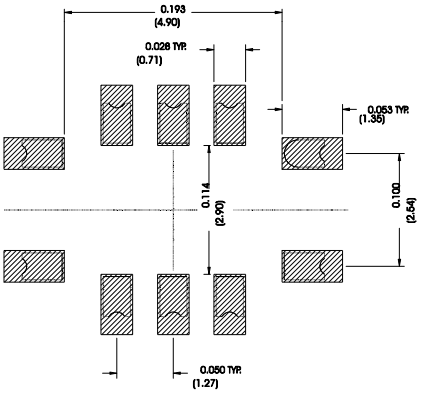
Filter Response Plot



SMP-03 10-Terminal Ceramic Surface-mount Case
5 x 7 mm Nominal Footprint



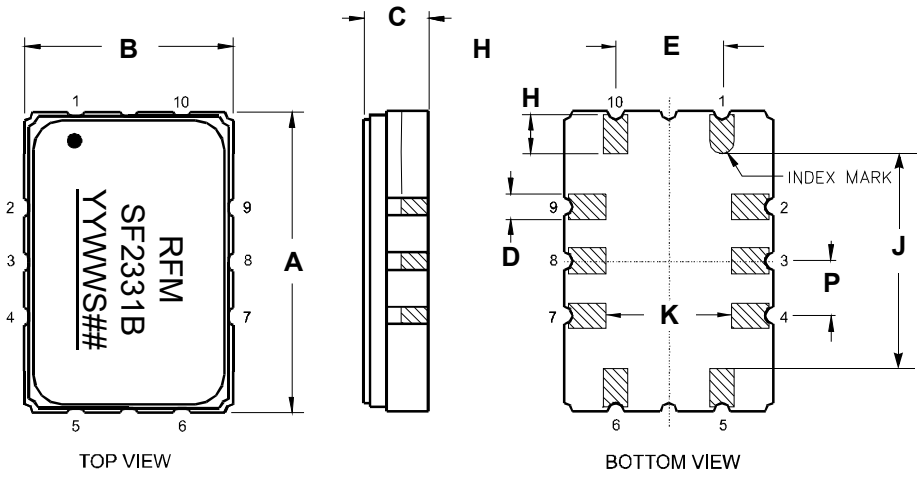
Recommended PCB Footprint



Case Dimensions						
Dimension	**mm**			**Inches**		
	Min	**Nom**	**Max**	**Min**	**Nom**	**Max**
A	6.80	7.00	7.20	0.268	0.276	0.283
B	4.80	5.00	5.20	0.189	0.197	0.205
C	-	1.65	2.00	-	0.065	0.079
D	0.47	0.60	0.73	0.019	0.024	0.029
E	2.41	2.54	2.67	0.095	0.100	0.105
H	0.87	1.0	1.13	0.034	0.039	0.044
J	4.87	5.00	5.13	0.192	0.197	0.202
K	2.87	3.00	3.13	0.113	0.118	0.123
P	1.14	1.27	1.40	0.045	0.050	0.055

Electrical Connections		
Connection		**Terminals**
Port 1	Single-ended Input	10
Port 2	Single-ended Output	5
	Ground	All others

Case Materials	
Solder Pad Plating	0.3 to 1.0 µm Gold over 1.27 to 8.89 µm Nickel
Lid Plating	2.0 to 3.0 µm Nickel
Body	Al_2O_3 Ceramic



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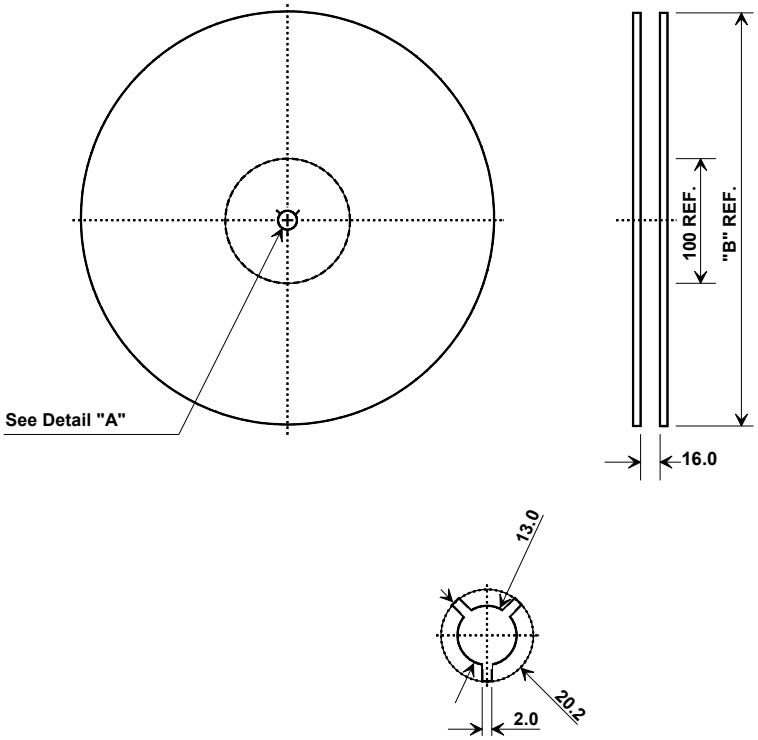
Tape and Reel Specifications

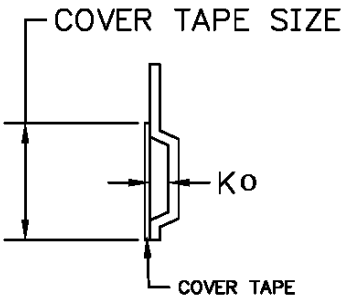
Tape and Reel Standard per ANSI/EIA-481

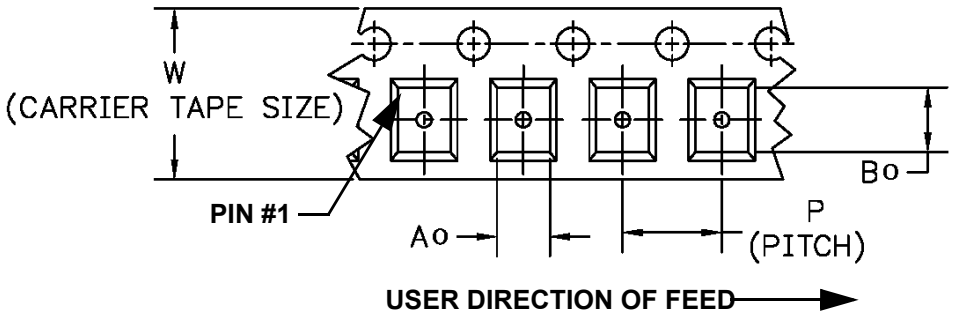


"B" Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	2000

COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	5.6 mm
Bo	7.6 mm
Ko	2.0 mm
Pitch	8.0 mm
W	16.0 mm





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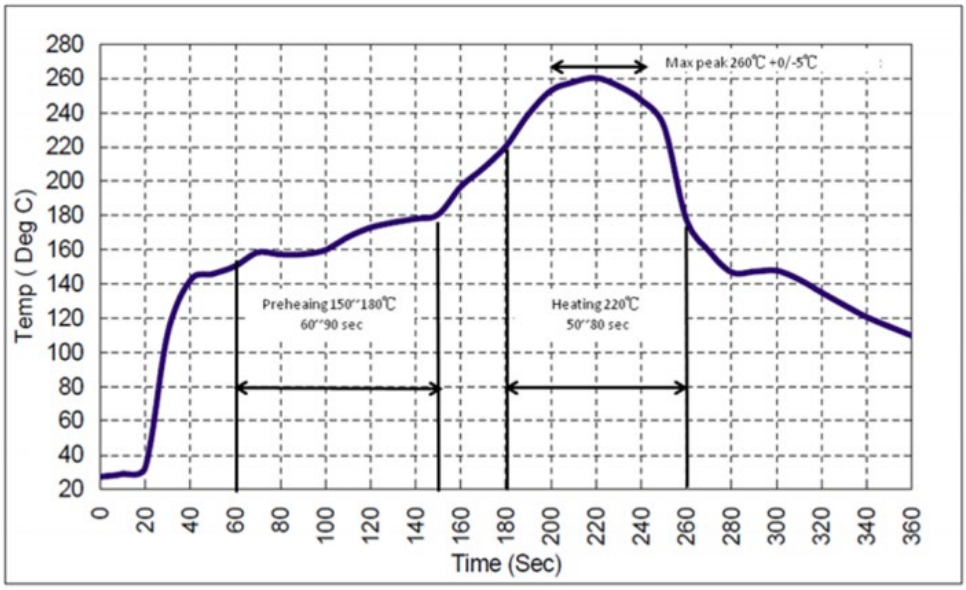
Recommended Reflow Profile

1. Preheating shall be fixed at 150~180ºC for 60~90 seconds.
2. Ascending time to preheating temperature 150ºC shall be 30 seconds min.
3. Heating shall be fixed at 220ºC for 50~80 seconds and at 260ºC +0/-5ºC peak (10 seconds).
4. Time: 5 times maximum.



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